

# Work Order ID 58470

May 7, 2010 10:23:22 AM



Page 1

Item ID: D4039-3

Accept



Setup Start



Revision ID:

Item Name: Aft Bracket

Stop



Start Date: 07/05/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 14/05/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

*PL*

Date: 10-5-07 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4039

A

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut blank as per file D4039-3\_BLANK

*B 10-5-11*

*(4)*

110

0.00



HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

MACHINE AS PER FOLI FA881 AND DWG

FOLIO REV: *AA*

DWG REV: *A*

DEBURR

*aml 10/05/19*

*4*

*0*

**Work Order ID 58470**

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Page 2

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Cust Item ID:

Required Date: 14/05/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

only 10/02/19

4

0

130

QC8

0.00



QC

Memo

0.00

Quality Control

B.A 10/05/19

4

0

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

91 10/05/25

4

0

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Page 3

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Cust Item ID:

Required Date: 14/05/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation

Description *1114207*

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

*START=2:15pm  
Temp: 320°F  
FIN: 2:45pm*

0.00

*2) JH 10/05/25*

*4*

*Ø*

Powder Coating

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

*H BK 10-5-25*

170

Identify as per dwg & Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

*10-5-27 SF (4)*

**Work Order ID 58470**

May 7, 2010 10:23:22 AM



Page 4

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Stop



Start Date: 07/05/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 14/05/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/05/31 98  
MF  
10-5-27

# Picklist Print

May 7, 2010 10:23:27 AM

Page 1

Work Order ID: 58470



Parent Item: D4039-3



Parent Item Name: Aft Bracket

Start Date: 07/05/2010

Required Date: 14/05/2010

Comments: Ipp Rev:A New Issue 09-12-15 JLM Verified By:EC

Start Qty: 4.00

Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Qty Issued	Date Issued	Status
M6061T6B1.000X15.00 0		Purchased	No			100	f	78.5000	3	12.		



6061-T6 Bar 1.00 x 15.00



R10-5-11

(4)

Location

Loc Qty

Loc Code

MAT

72

114562

72

MAT07

6.5

9544

6.5

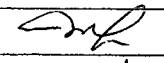
114562

DART AEROSPACE LTD		Work Order:	58476
Description: FWD BRACKET		Part Number:	D4039-3
Inspection Dwg: D439 Rev: A		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

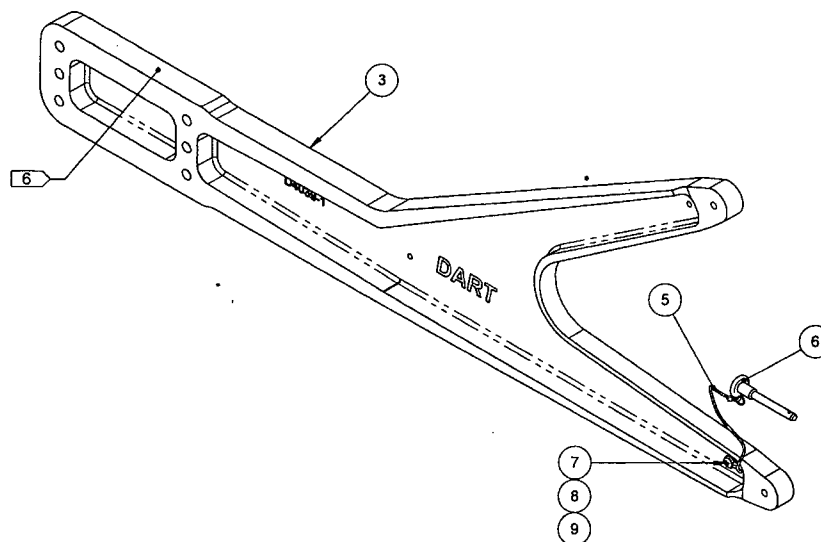
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	±.030	1.018	/			
33.80	±.030	33.80	/			
.730	±.010	.740	/			
R.50	±.030	R.500	/			
2.250	±.010	2.250	/			
.857	±.010	.858	/			
.873	±.010	.875	/			
6.000	±.010	6.001	/			
.200	±.010	.202	/			
Ø.261	±.006 ±.001	Ø.267	/			
.561	±.010	.560	/			
Ø.203	±.005 ±.001	Ø.205	/			
Ø.391	±.006 ±.001	Ø.395	/			
1.00	±.030	1.000	/			
R.13	±.030	R.125	/			
4.00	±.030	4.000	/			
.19	±.030	.205	/			
.575	±.080	.575	/			
3.73	±.030	3.734	/			

Measured by: 	Audited by: B.A	Prototype Approval:	N/A
Date: 10/05/19	Date: 10/05/19	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

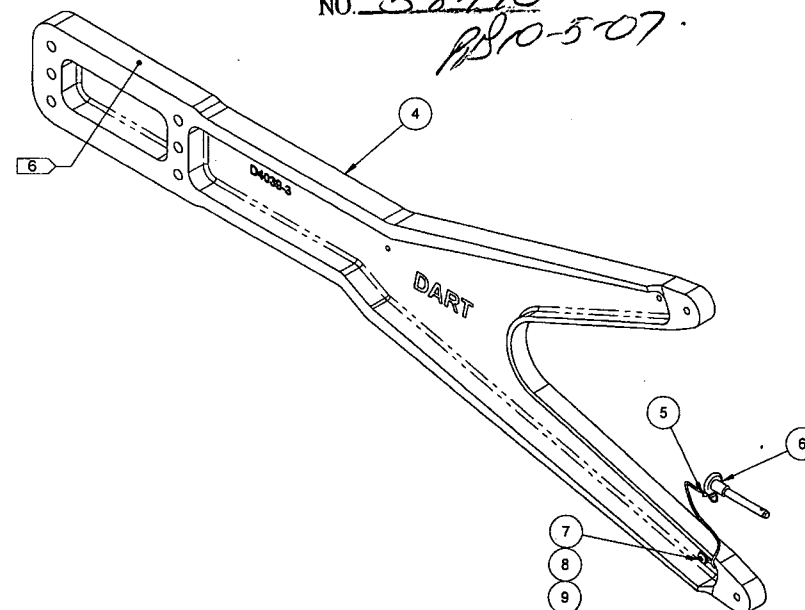
ITEM NO.	QTY. -041	QTY. -043	PART NUMBER	DESCRIPTION
1	X		D4039-041	FWD BRACKET ASSEMBLY
2		X	D4039-043	AFT BRACKET ASSEMBLY
3	1		D4039-1	FWD BRACKET
4		1	D4039-3	AFT BRACKET
5	1	1	D2690-6	LANYARD
6	1	1	BLRS-010	PIP PIN
7	1	1	MS27039-1-11	SCREW
8	1	1	MS21042L3	NUT
9	3	3	NAS1149D0363J	WASHER



**D4039-041 FWD BRACKET ASSEMBLY**

- NOTES:
- 1) MATERIAL: N/A
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4039-041/-043" AND B/N USING FINE POINT PERMANENT INK MARKER
  - 7) WEIGHT: N/A

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO APPROVAL  
WITHOUT NOTICE  
WORK ORDER  
NO. 58470  
9810-507



**D4039-043 AFT BRACKET ASSEMBLY**

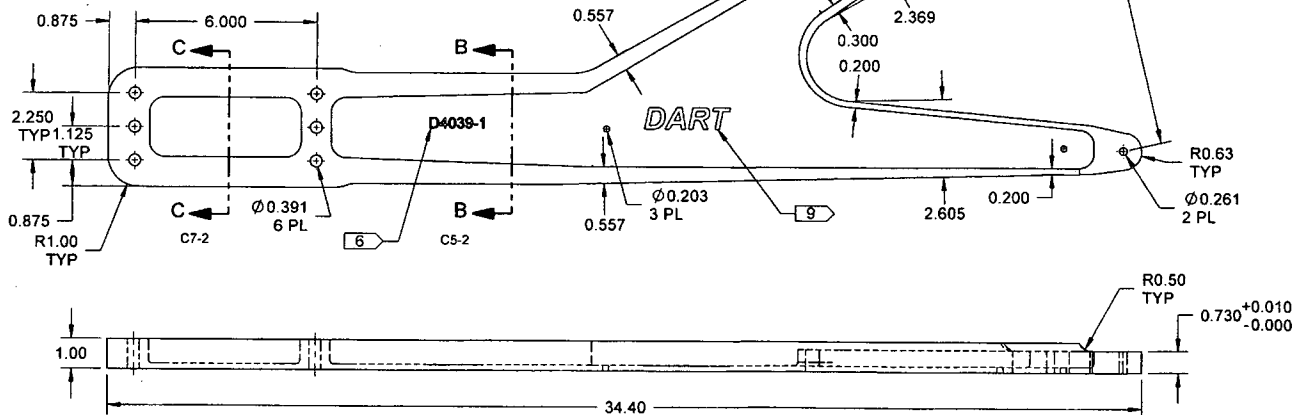
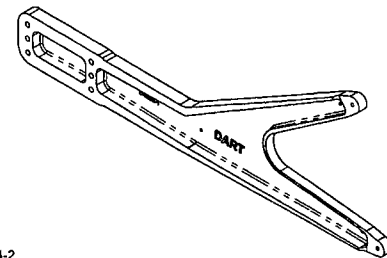
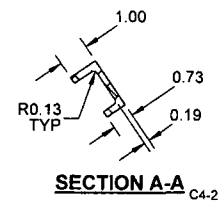
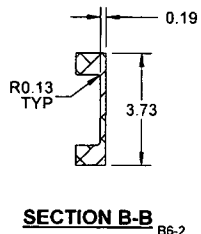
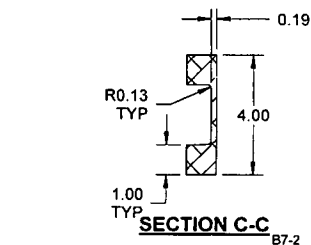
RELEASED  
2010-04-14

A	NEW ISSUE		09.12.14
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.12.14		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4039** REV. A  
SHEET 1 OF 3  
TITLE **BRACKET** SCALE NTS

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**D4039-1 FWD BRACKET**

**NOTES:**

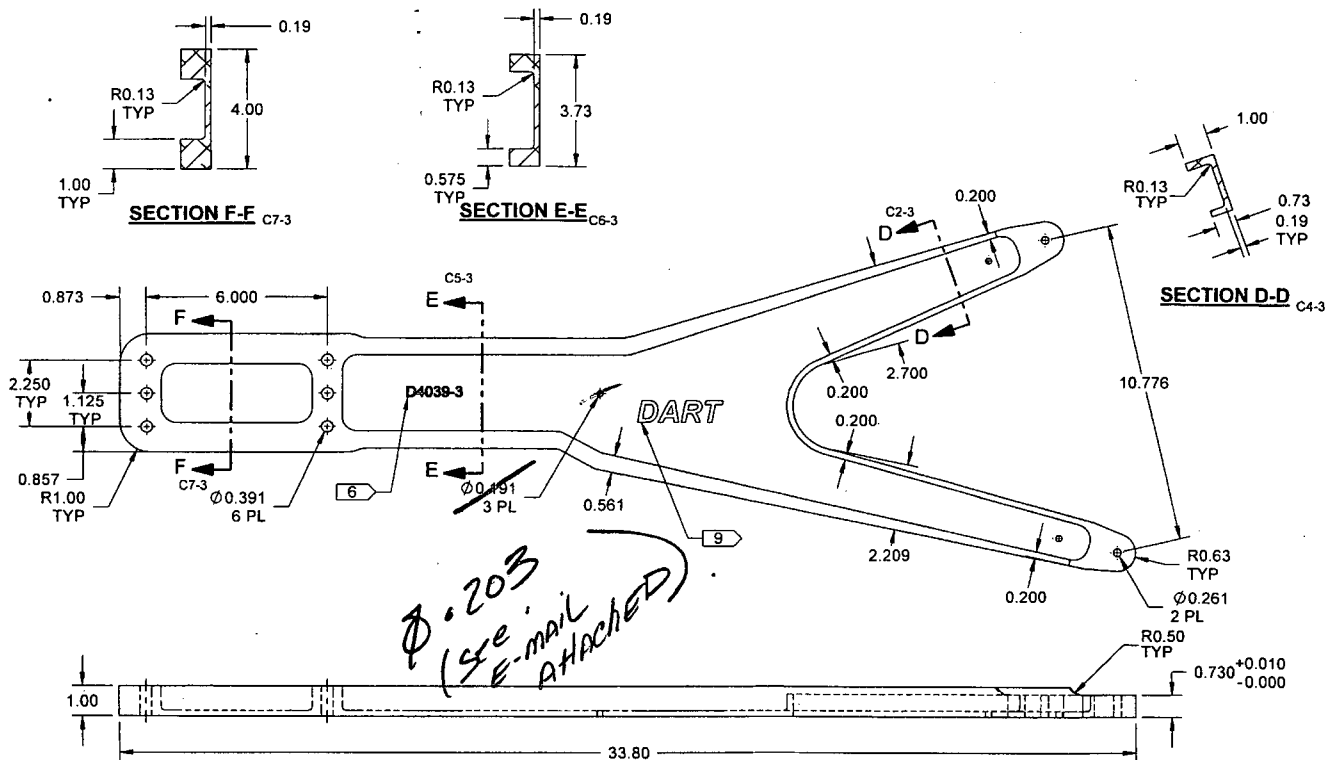
- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 1.000 THICK  
PER AMS-QQ-A-250/11 (OR AMS 4025/4027)  
REF DART SPEC M6061T6S1.000
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N AND BATCH NUMBER IN THIS AREA TO MAX  
DEPTH OF 0.010 WITH MIN TOOL RADIUS OF 0.010
- 7) WEIGHT: 6.64 lbs
- 8) MACHINE PER DART SOLIDWORKS PART "D4039-1.REVA.SLDPRT"
- 9) ENGRAVE DART LOGO IN THIS AREA TO MAX DEPTH OF 0.015 WITH MIN TOOL RADIUS OF 0.250

W/O 58470

RELEASED  
2010-04-16

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4039	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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**D4039-3 FWD BRACKET**

**NOTES:**

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 1.000 THICK  
PER AMS-QQ-A-250/11 (OR AMS 4025/4027)  
REF DART SPEC M6061T6S1.000
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N AND BATCH NUMBER IN THIS AREA TO MAX  
DEPTH OF 0.010 WITH MIN TOOL RADIUS OF 0.010
- 7) WEIGHT: 6.23 lbs
- 8) MACHINE PER DART SOLIDWORKS PART "D4039-3 REVA.SLDPRPT"
- 9) ENGRAVE DART LOGO IN THIS AREA TO MAX DEPTH OF 0.015 WITH MIN TOOL RADIUS OF 0.250

**RELEASED**  
2010-04-14  
AWP

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. <b>D4039</b>	REV. A
MFG. APPR.		TITLE <b>BRACKET</b>	SHEET 3 OF 3
APPROVED		SCALE	NTS
DE APPR.		COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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## Jean-Luc Menard

---

**From:** Harvey Siemens [hsiemens@dartaero.com]  
**Sent:** April 28, 2010 11:27 AM  
**To:** 'Jean-Luc Menard'; 'Mike Petsche'  
**Cc:** 'Marc Bellavance'  
**Subject:** RE: D4039 Rev. PB1

Thank you all for your quick reply. The rest of the paperwork will be coming your way shortly.

JL

I think that the hole that I dimensioned at 0.191 was the only hole in the model that was that size. Weird since the model is based on the "other" Y brackets.

Regards,

*Harvey Siemens*

Mechanical Designer  
DART Aerospace Ltd.

P: 403-717-0328  
F: 403-717-1288  
E: hsiemens@dartaero.com  
W: www.dartaero.com

M: 1060 McTavish Road NE, Calgary, Alberta, T2E 7G6

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---

**From:** Jean-Luc Menard [mailto:jmenard@dartaero.com]  
**Sent:** Wednesday, April 28, 2010 9:17 AM  
**To:** 'Harvey Siemens'; 'Mike Petsche'  
**Cc:** 'Marc Bellavance'  
**Subject:** RE: D4039 Rev. PB1

Looks good, I don't know what happened, the original parts made in December were both drilled at .203"?????  
As long as its fixed,  
Thx  
JLM

---

**From:** Harvey Siemens [mailto:hsiemens@dartaero.com]  
**Sent:** April 28, 2010 11:11 AM  
**To:** Mike Petsche  
**Cc:** 'Marc Bellavance'; Jean-Luc Menard  
**Subject:** D4039 Rev. PB1

Hey guys,

Talked with JL this morning and he raised an inconsistency between the D4039-1 and the -3 regarding the hole

19/05/2010

sizes. This discrepancy has been corrected. Since you were the original reviewers, I am forwarding the prelim drawing to you. Thank you for your time in going over the attached drawing. Let me know if there are any other details that need to be changed or adjusted.

If everybody is good with it (let me know) I'll revise the MDL and issue an ECN. David will approve shortly after that and you'll have an updated drawing.

JL

Thought about Section A-A and D-D and the 0.73 dimension that is shown there vs the 0.730 +0.010/-0.000 dimension shown in zone B3. The B3 dimension is for the lug at the end while the section view dimension is just for that shorter leg of the beam. I think the way we have it dimensioned is correct. We want to maintain a tight tolerance on the lug but the shorter leg portion is not so critical. Let me know if that explanation doesn't make sense.

Regards,

*Harvey Siemens*

Mechanical Designer

DART Aerospace Ltd.

P: 403-717-0328

F: 403-717-1288

E: hsiemens@dartaero.com

W: www.dartaero.com

M: 1060 McTavish Road NE, Calgary, Alberta, T2E 7G6

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19/05/2010